

BookletChart™

French Frigate Shoals

NOAA Chart 19401



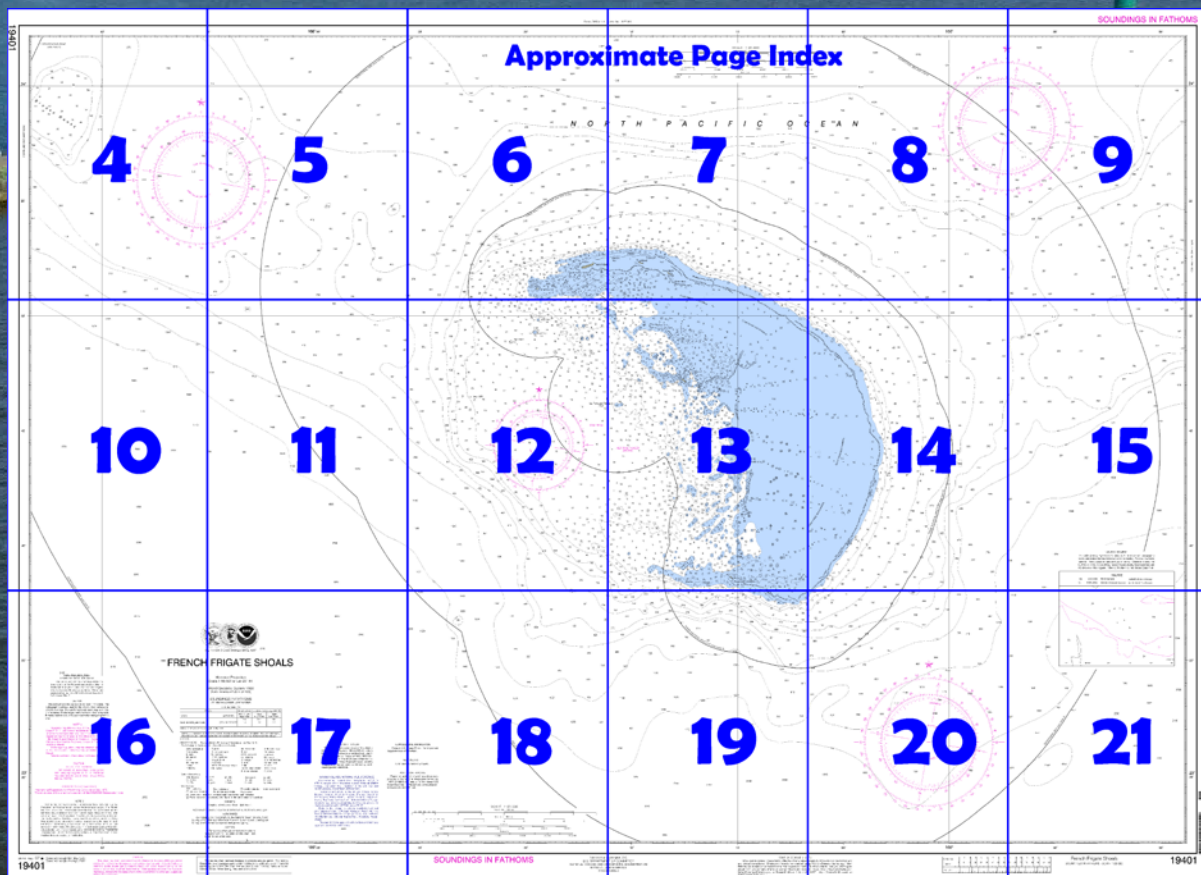
A reduced-scale NOAA nautical chart for small boaters

When possible, use the full-size NOAA chart for navigation.



Included Area

- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at <http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=19401>.



(Selected Excerpts from Coast Pilot)

French Frigate Shoals, about 85 miles W from Necker Island, is a crescent-shaped atoll about 17 miles long in a NNW direction. The atoll consists of a coral reef with a number of small sand islets on it, and is flanked by a volcanic rock and numerous coral heads and reefs. It is home to many sea birds, seals, turtles and other fish and wildlife all protected by Federal Law. The other islands are of little assistance in navigation due to their constantly changing size and shape

and low elevations. Shark Island has been observed to be particularly unreliable in this regard.

The crescent reef is double, and the outer and inner arcs bound a lagoon. At its midpoint the windward reef lies about 8 miles from a line joining the tips of the crescent; the leeward reef is about 5 miles from this line. The windward reef is nearly continuous and can be plainly seen in the daytime for a considerable distance by vessels approaching from the N, E or SE. The sea practically always breaks over the reef, and during the few times it is not breaking, the green shoal water inside the reef is seen in ample time to avoid danger. The bottom slopes uniformly from the reef to the 100-fathom curve 1 to 2 miles off, and there are no known dangers from N through E to S of the windward reef. The leeward or inner reef, however, is broken in many places and in normal weather is seldom marked by breakers. The lagoon between the reefs is very foul with numerous coral heads, some just under the surface of the water.

La Perouse Pinnacle (23°46'08"N., 166°15'39"W.), a volcanic rock about 60 yards long and 20 yards wide, lies about midway between the tips of the crescent and W of the leeward arc of the reef. The rock is so steep and rugged that it is almost inaccessible. From a distance its guano-coated outline resembles a brig under sail. A small detached lava rock about 9 feet high lies off the W side of the pinnacle. The points of the crescent reef, as indicated by the ends of the line of breakers, bear about 170° and 310° from La Perouse Pinnacle. La Perouse Pinnacle is reported to be the first object sighted, generally, when approaching the atoll, and that it is usually picked up on radar at 12 to 15 miles.

Shark Island, the northwesternmost of the sand islets, lies 6 miles NW of La Perouse Pinnacle. A coral reef fringes the island. **Tern Island**, about 2 miles ENE of Shark Island, is marked by two 40-foot towers, low concrete buildings, a wooden telegraph pole, and four large trees. The island and buildings are visible at 8 and 5 miles, respectively. There are no facilities on the island.

East Island, 3 miles ENE of La Perouse Pinnacle, is a low sand bar 600 yards long in a NW direction and about 100 yards across. Reefs that are awash most of the time extend a mile W and 0.2 mile S from the island; the S reef seldom breaks. A coral head that sometimes breaks is 0.6 mile S of East Island. NE and E of the island are numerous coral heads/reefs. Extreme caution must be exercised when navigating in the vicinity of these islets because of the numerous coral heads.

Channels.—The principal approach to Tern Island is through a natural channel that leads to a lagoon and anchorage SE of the island. Entry into the lagoon is through an opening in the reef indicated by the 3¼-fathom sounding in 23°51'09"N., 166°16'27"W., on chart 19402. Mariners are advised that attempting entry into the lagoon requires extensive local knowledge, good sea and weather conditions, and the sound judgment to recognize when conditions allow committing the vessel to a course through the reef opening.

Anchorage.—The best holding ground SW of French Frigate Shoals is in depths of 13 to 15 fathoms, sand bottom; in lesser depths the bottom is mostly coral. There are no all-weather anchorages for large vessels, but the conformation of the reef is such that some protection can be found from choppy seas and ground swell. Small vessels can find good protection from most weather behind the shoals and coral heads.

U.S. Coast Guard Rescue Coordination Center **24 hour Regional Contact for Emergencies**

RCC Honolulu	Commander	(808) 535-3333
	14th CG District Honolulu, HI	

Table of Selected Chart Notes

EAST ISLAND

East Island is marked by towers.

HEIGHTS

Heights in feet above Mean High Water.

Mercator Projection

Scale 1:80,000 at Lat 23° 44'

World Geodetic System 1984
(North American Datum of 1983)

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

HAWAIIAN ISLANDS NATIONAL WILDLIFE REFUGE

The Hawai'ian Islands from longitude 161° W to 176° W are part of the Hawaiian Islands National Wildlife Refuge, and under the jurisdiction of the U.S. Fish and Wildlife Service, Department of the Interior.

The islands and atolls in the refuge include Nihoa, Necker Island, French Frigate Shoals, Gardner Pinnacles, Maro Reef, Laysan Island, Lisianski Island, Pearl and Hermes Atoll. National Wildlife Refuge System regulations pertaining to these islands and atolls are contained in CFR 50, parts 25-32.

Entry to the refuge is strictly prohibited without prior approval from the Refuge Manager, Pacific Remote Islands National Wildlife Refuge Complex, U.S. Fish and Wildlife Service, 300 Ala Moana Blvd., Honolulu, Hawaii 96850.

The restrictions apply to all civilian and military agencies as well as individuals.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

HORIZONTAL DATUM

The horizontal reference datum of this chart is World Geodetic System 1984 (WGS 84), which for charting purposes is considered equivalent to the North American Datum of 1983 (NAD 83). The projection of this chart was shifted from a local datum by means of georeferenced satellite imagery and has not been confirmed by land-based geodetic methods.

PAPAHĀNAUMOKUĀKEA
MARINE NATIONAL MONUMENT

The entire area of this chart lies within the boundaries of the Papahānaumokuākea Marine National Monument and the French Frigate Shoals Special Preservation Area. These are protected areas. See 50 CFR 404 or Chapter 2, U.S. Coast Pilot 7.

PARTICULARLY SENSITIVE SEA AREA

This chart falls entirely within the limits of a Particularly Sensitive Sea Area (PSSA). A PSSA is an environmentally sensitive area in which and around which mariners should exercise extreme caution. See U.S. Coast Pilot volumes for information regarding this area.

NOTE C
SHIP REPORTING SYSTEM

The following vessels entering or departing any U.S. port of place and in transit through the reporting area are required to report into the System: all vessels 300 gross tons or greater and all vessels in the event of a developing emergency. The following vessels in transit through the reporting area should report into the System: all vessels 300 gross tons or greater, fishing vessels, and all vessels in the event of a developing emergency. See IMO SN.1, Circ. 273. Information concerning the Ship Reporting System is also published in the U.S. Coast Pilot 7, Chapters 2 and 14, and updated through Notices to Mariners. Information may also be obtained at the Office of the Commander, 14th Coast Guard District in Honolulu, or at the Office of the District Engineer, Corps of Engineers, in Honolulu.

NOTE B
AREA TO BE AVOIDED

All vessels solely in transit should avoid the area (MSC IMO SN.1/Circ.263).

CAUTION

Recent hydrographic surveys do not exist in this area. The hydrographic surveys used for this chart did not achieve full bottom coverage, thus uncharted coral heads may exist. Uncharted areas of submerged reef of unknown depth may exist. Extreme caution should be exercised when navigating in this area.

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 14th Coast Guard District in Honolulu, Hawaii or at the Office of the District Engineer, Corps of Engineers in Honolulu, Hawaii.

Anchorage regulations may be obtained at the Office of the Commander, 14th Coast Guard District in Honolulu, Hawaii.

Refer to section numbers shown with area designation.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the U.S. Coast Guard, Geological Survey, and National Geospatial-Intelligence Agency.

NOTE X

Within the 12-nautical mile Territorial Sea, established by Presidential Proclamation, some Federal laws apply. The Three Nautical Mile Line, previously identified as the outer limit of the territorial sea, is retained as it continues to depict the jurisdictional limit of other laws. The 9-nautical mile Natural Resource Boundary off the Gulf coast of Florida, Texas, and Puerto Rico, and the Three Nautical Mile Line elsewhere remain in most cases the inner limit of Federal fisheries jurisdiction and the outer limit of the jurisdiction of the states. The 24-nautical mile Contiguous Zone and the 200-nautical mile Exclusive Economic Zone were established by Presidential Proclamation. Unless fixed by treaty or the U.S. Supreme Court, these maritime limits are subject to modification.

SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

COLREGS, 80.1410 (see note A)

International Regulations for Preventing Collisions at Sea, 1972.

The entire area of this chart falls seaward of the COLREGS Demarcation Line.

TIDAL INFORMATION				
PLACE		Height referred to datum of soundings (MLLW)		
NAME	(LAT/LONG)	Mean Higher High Water	Mean High Water	Mean Low Water
		feet	feet	feet
East Island Frigate Shoals	(23°47'N/166°13'W)	1.4	1.1	0.2
NOTE: Chart was last revised: 4/92, 10/99, 12/02				
Dashes (- -) located in datum columns indicate unavailable datum values for a tide station. Real-time water levels, tide predictions, and tidal current predictions are available on the Internet from http://tidesandcurrents.noaa.gov . (Apr 2007)				

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
Al alternating	IQ interrupted quick	N nun	Rot rotating
B black	Iso isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute miles
DIA diaphane	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
R flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		R Bn radiobeacon	Y yellow

Bottom characteristics:

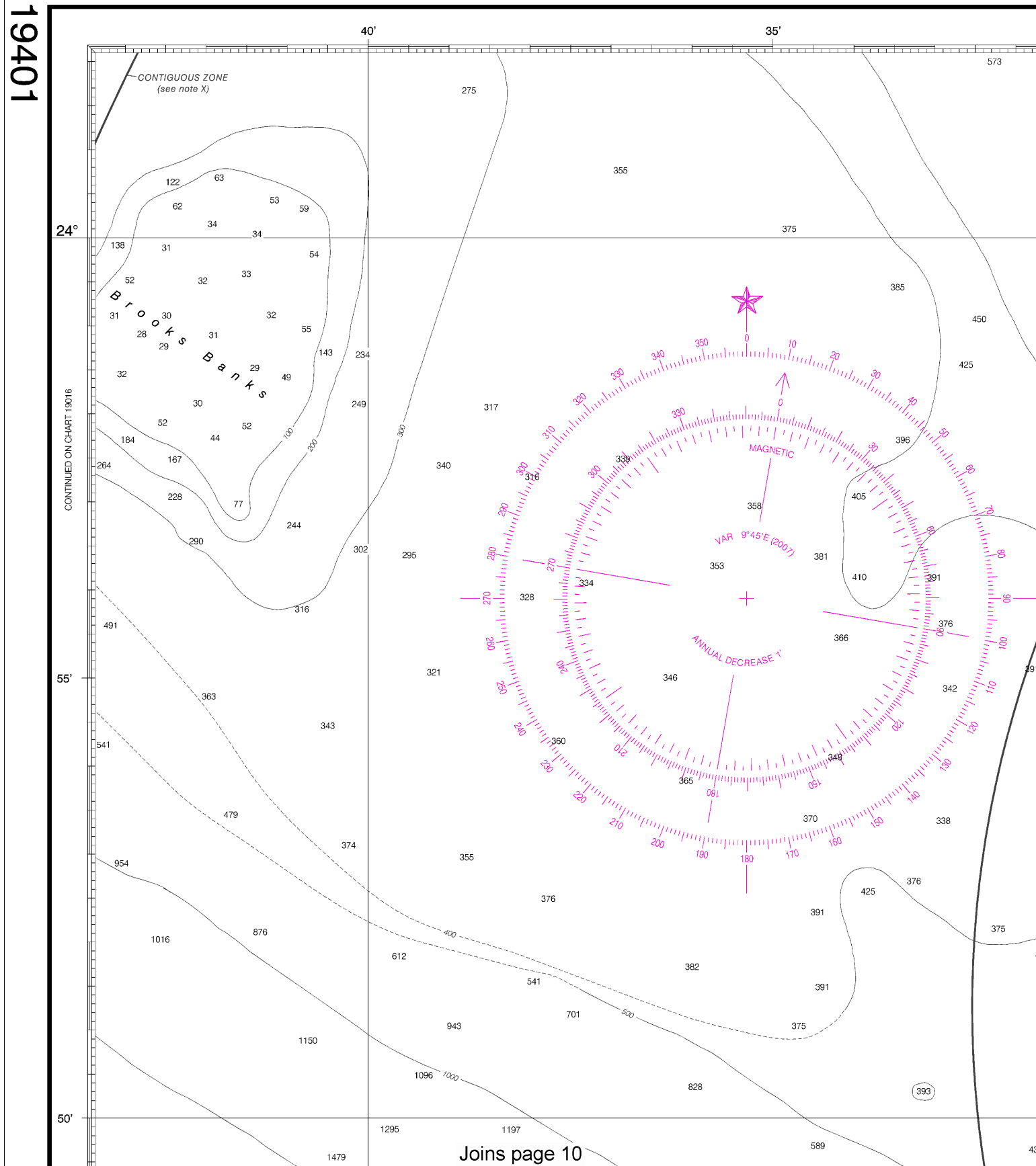
Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	n hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	

(1) Wreck, rock, obstruction, or shoal swept clear to the depth indicated.

(2) Rocks that cover and uncover, with heights in feet above datum of soundings.

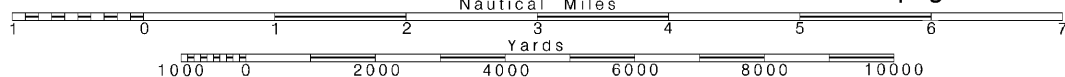


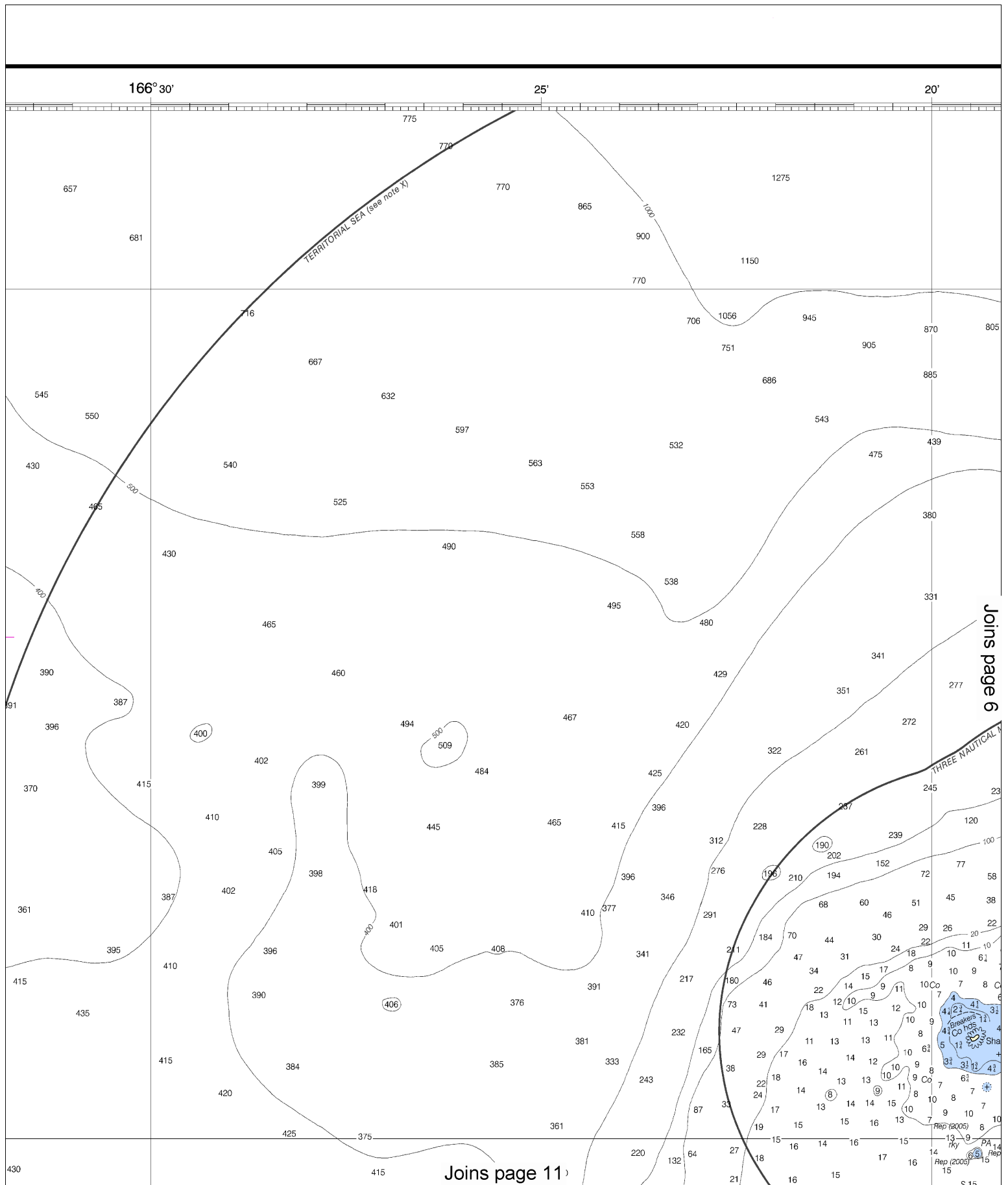
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:80,000
Nautical Miles

See Note on page 5.



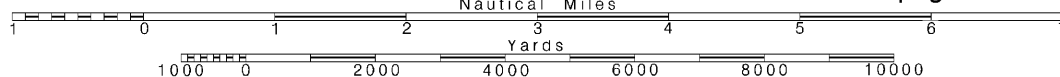


This BookletChart was reduced to 75% of the original chart scale.
 The new scale is 1:106667. Barscales have also been reduced and
 are accurate when used to measure distances in this BookletChart.

Printed at reduced scale.

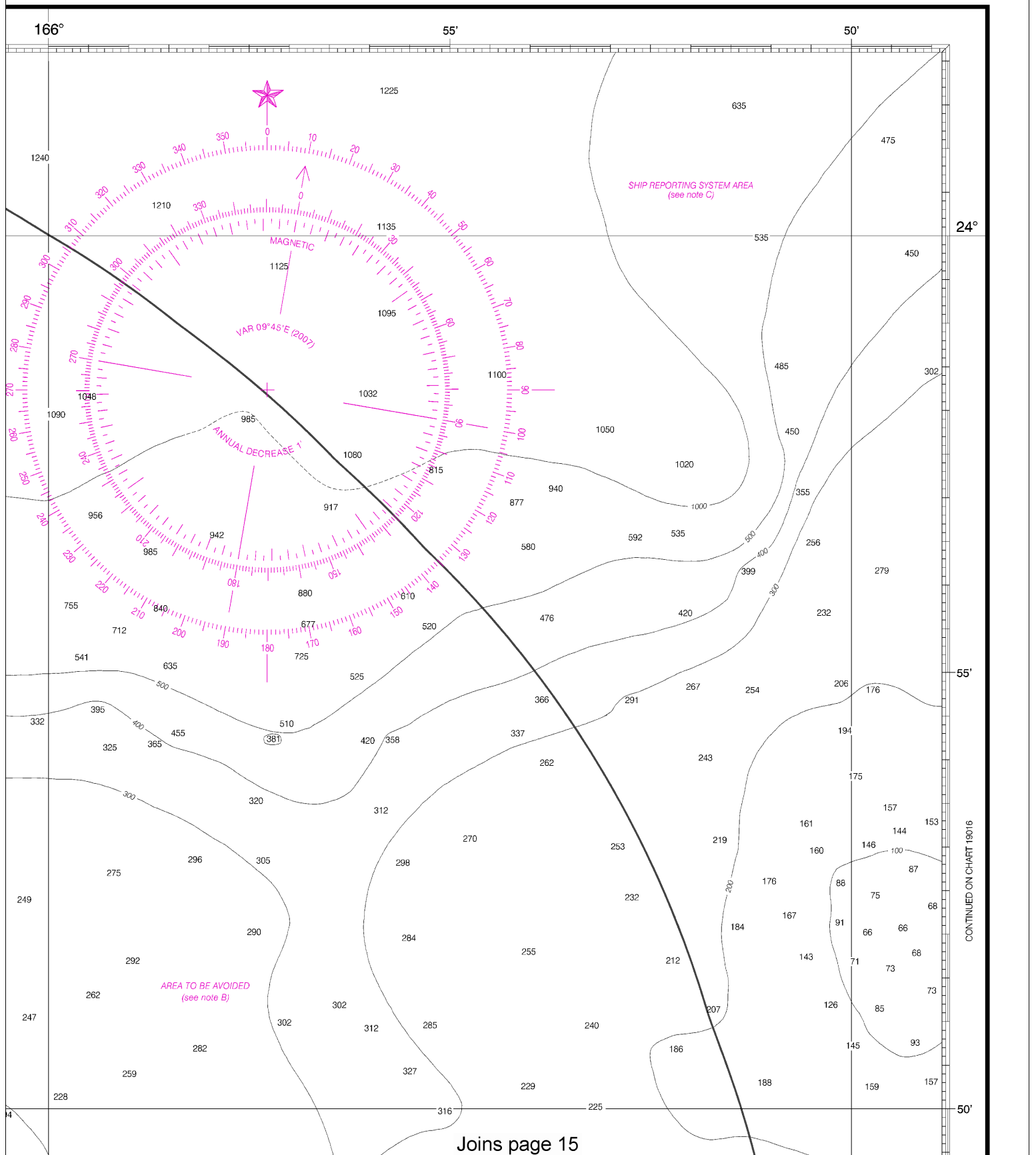
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Nautical Miles

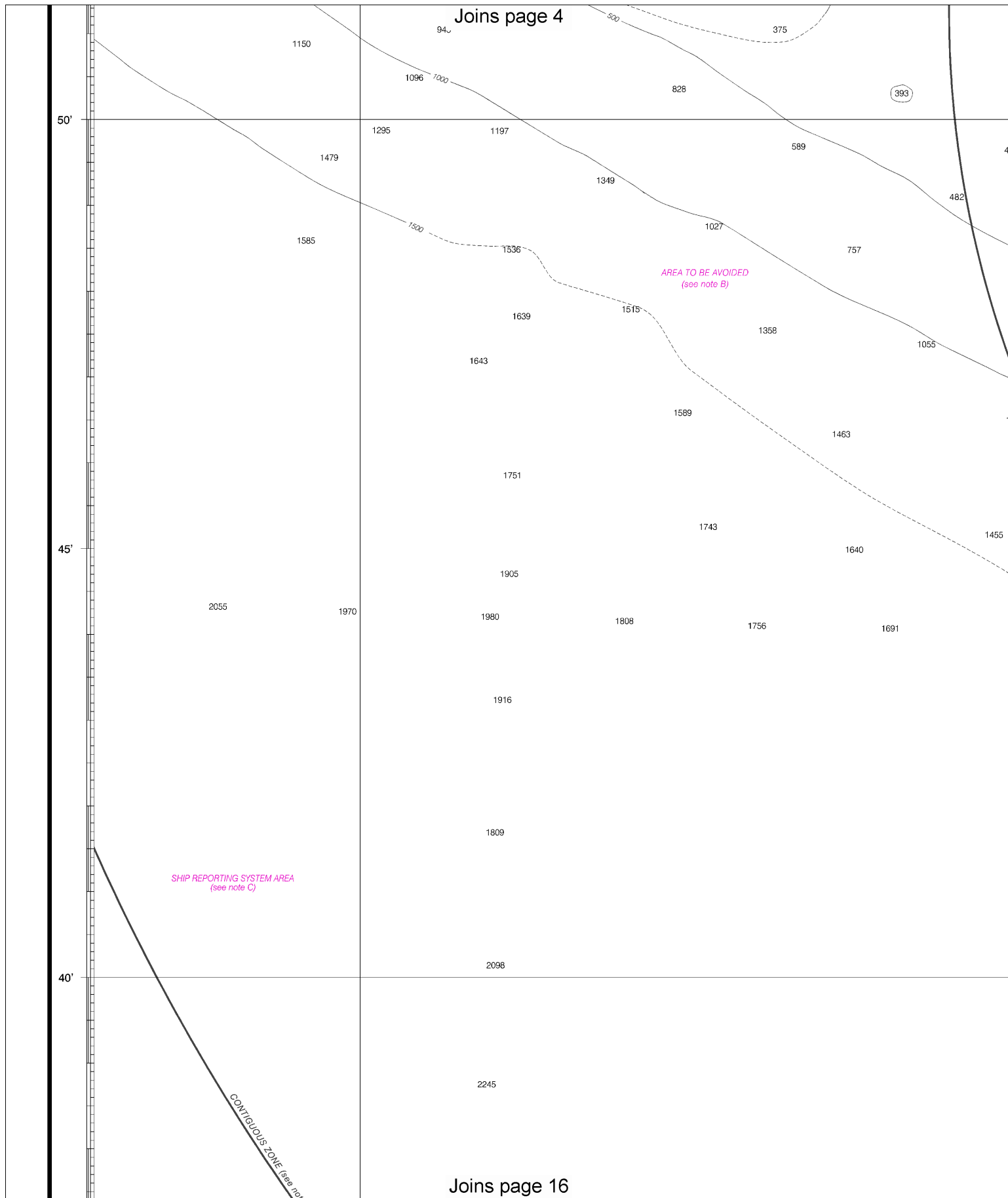
See Note on page 5.



Note: Chart grid lines are aligned with true north.

SOUNDINGS IN FATHOMS





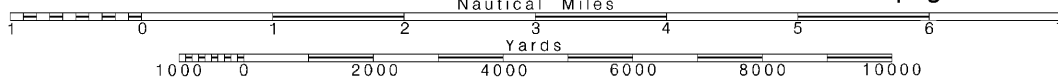
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Note: Chart grid lines are aligned with true north.

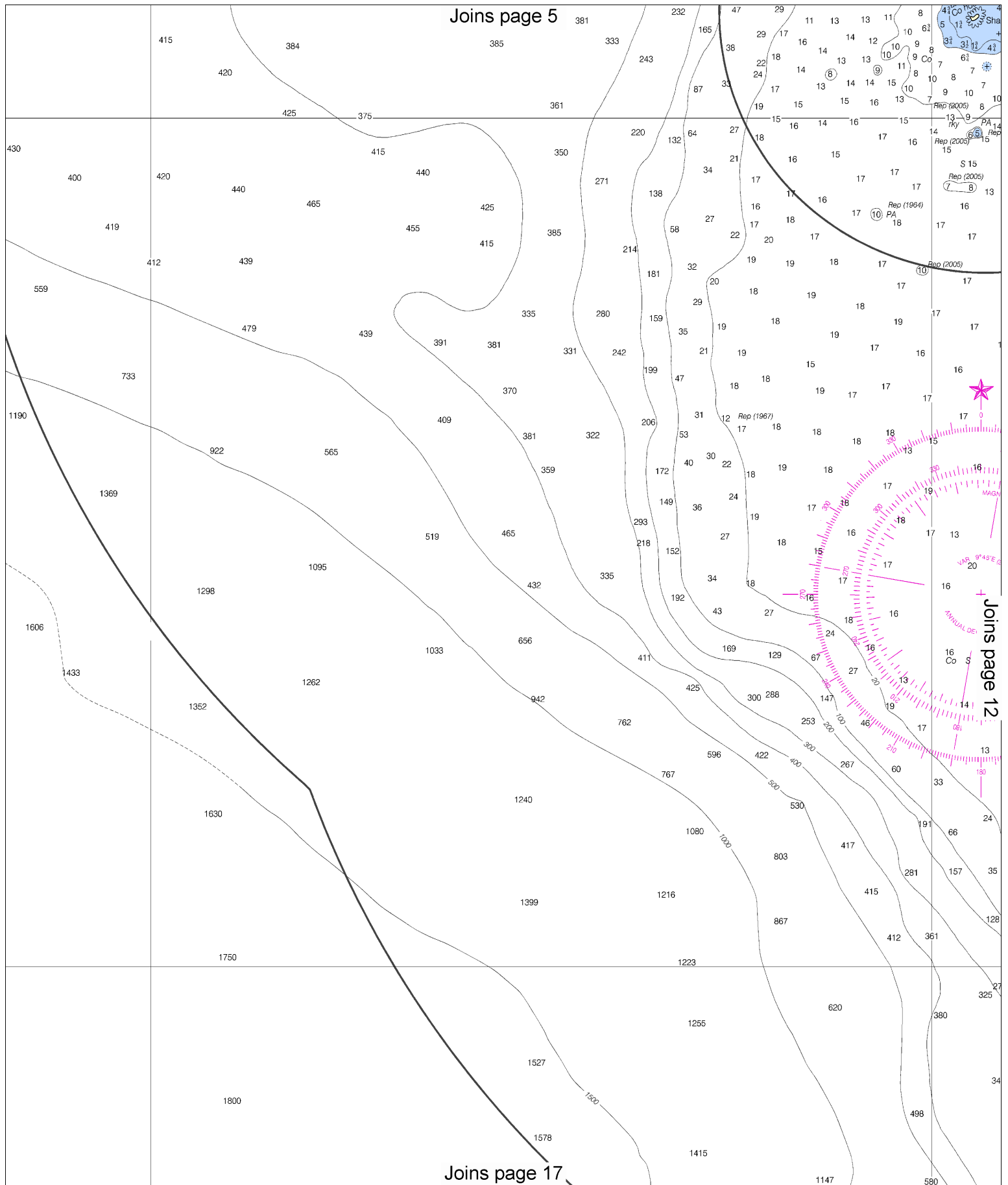
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SCALE 1:80,000
Nautical Miles

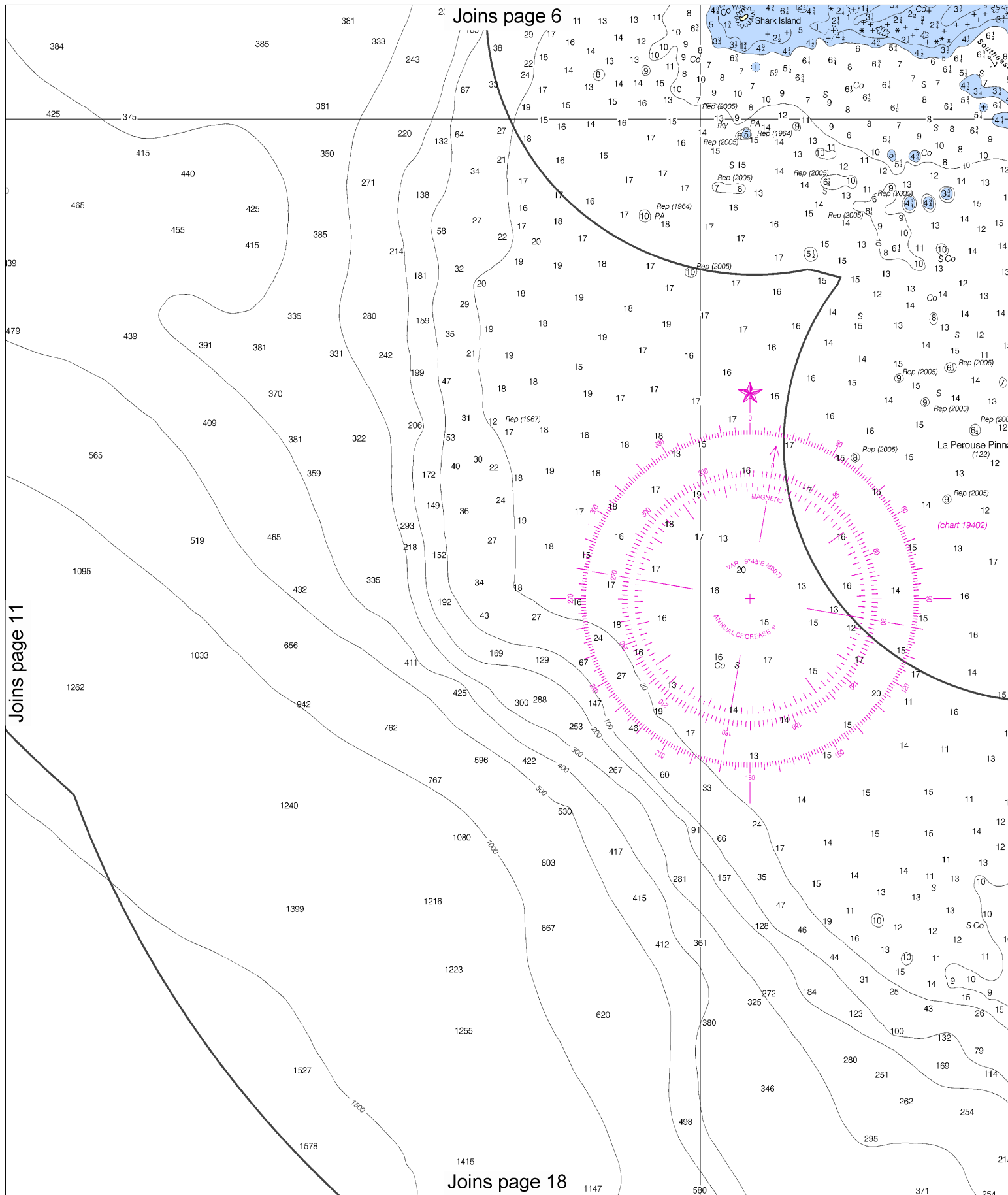
See Note on page 5.



Joins page 5



Joins page 12



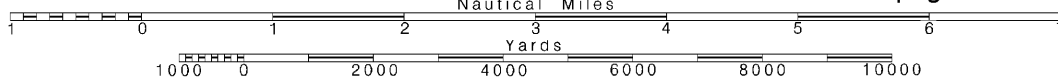
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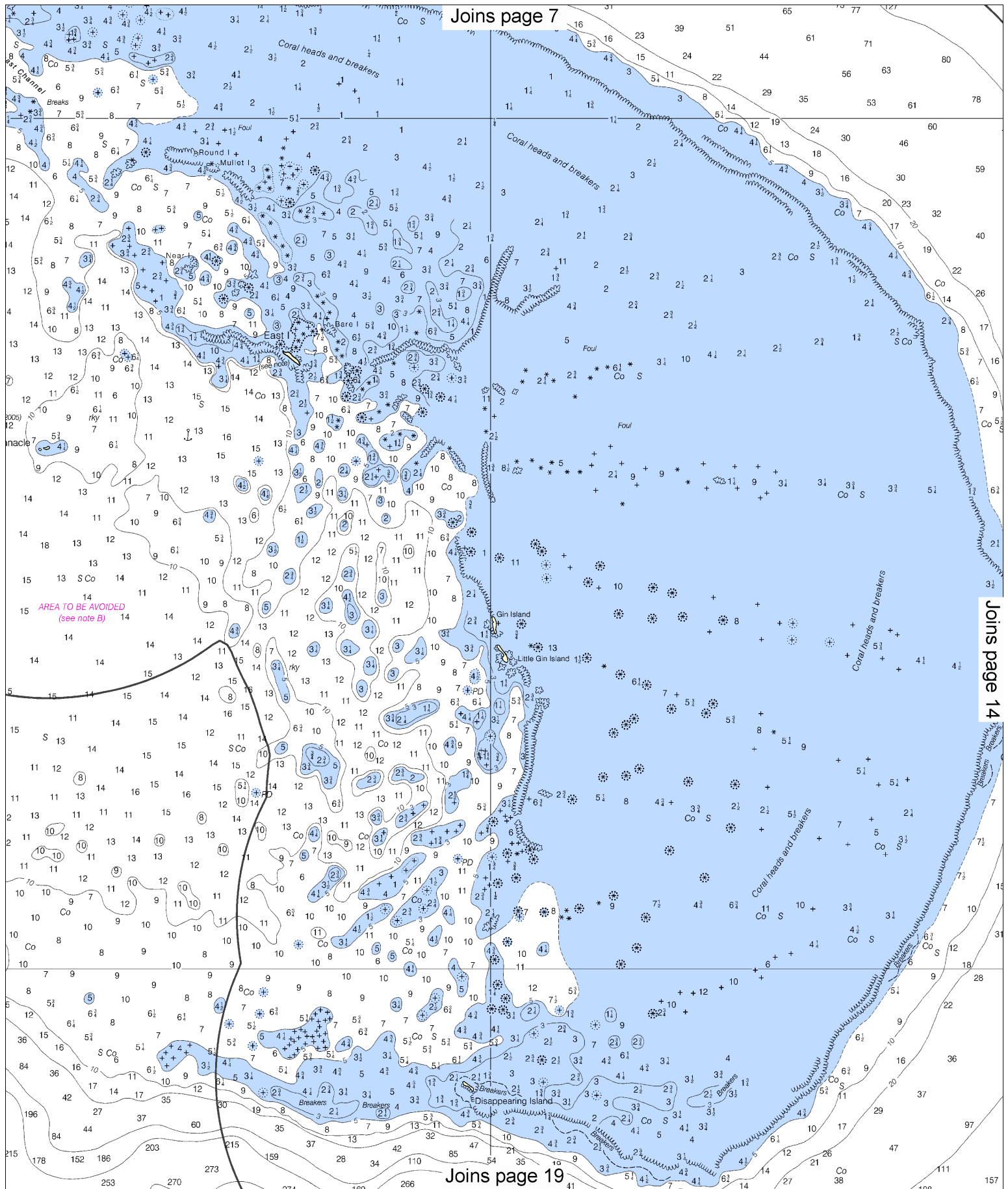
Note: Chart grid lines are aligned with true north.

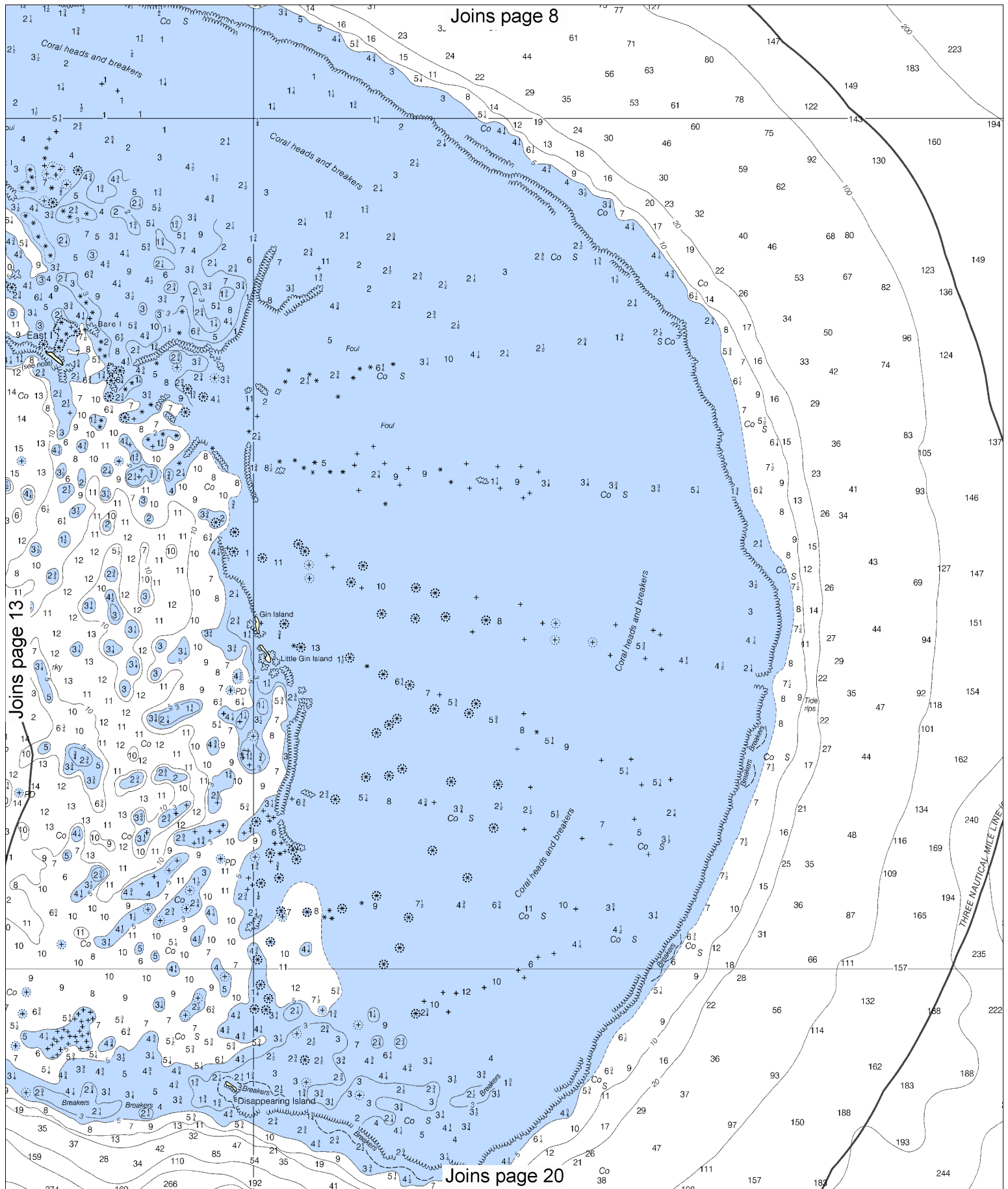
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SCALE 1:80,000
Nautical Miles

See Note on page 5.







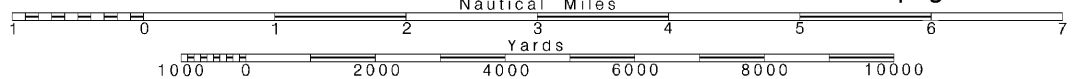
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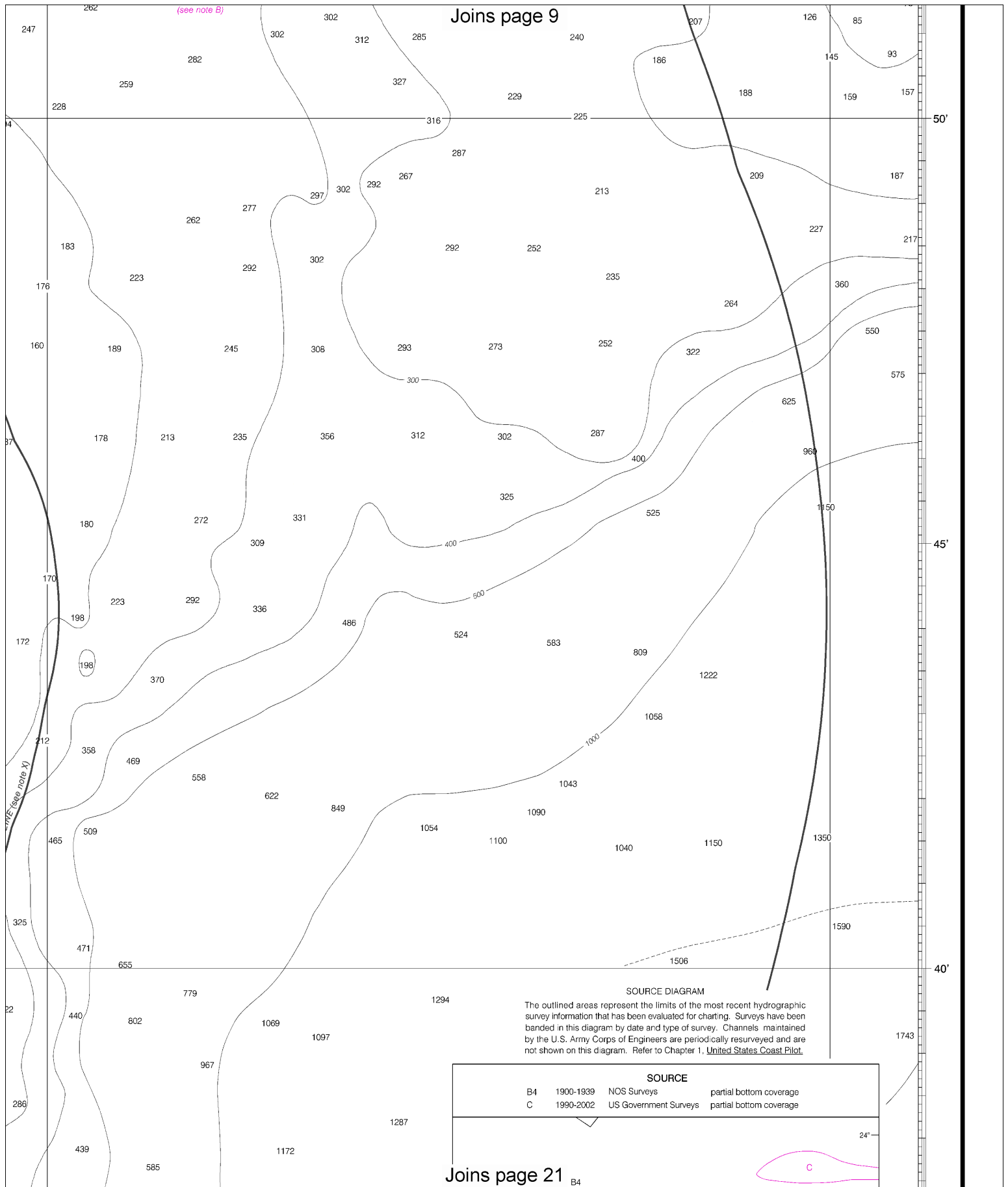
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:80,000
Nautical Miles

See Note on page 5.





Joins page 9

(see note B)

SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

SOURCE			
B4	1900-1939	NOS Surveys	partial bottom coverage
C	1990-2002	US Government Surveys	partial bottom coverage

Joins page 21

B4

C

2245

2416

2463

2435

2420

CAUTION

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HORIZONTAL DATUM

The horizontal reference datum of this chart is World Geodetic System 1984 (WGS 84), which for charting purposes is considered equivalent to the North American Datum of 1983 (NAD 83). The projection of this chart was shifted from a local datum by means of georeferenced satellite imagery and has not been confirmed by land-based geodetic methods.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 7 for important supplemental information.

EAST ISLAND

East Island is marked by towers.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

COLREGS, 80.1410 (see note A)

International Regulations for Preventing Collisions at Sea, 1972.
The entire area of this chart falls seaward of the COLREGS Demarcation Line.

NOTE X

Within the 12-nautical mile Territorial Sea, established by Presidential Proclamation, some Federal laws apply. The Three Nautical Mile Line, previously identified as the outer limit of the territorial sea, is retained as it continues to depict the jurisdictional limit of other laws. The 9-nautical mile Natural Resource Boundary of the Gulf coast of Florida, Texas, and Puerto Rico, and the Three Nautical Mile Line elsewhere remain in most cases the inner limit of Federal fisheries jurisdiction and the outer limit of the jurisdiction of the states. The 24-nautical mile Contiguous Zone and the 200-nautical mile Exclusive Economic Zone were established by Presidential Proclamation. Unless fixed by treaty or the U.S. Supreme Court, these maritime limits are subject to modification.

2435

2540

2583

2572

2668



2110

FRENCH FRIGATE SHOALS

Mercator Projection
Scale 1:80,000 at Lat 23° 44'

World Geodetic System 1984
(North American Datum of 1983)

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

TIDAL INFORMATION

PLACE	Height referred to datum of soundings (MLW)	Mean Higher High Water	Mean High Water	Mean Low Water
		feet	feet	feet
East Island Frigate Shoals (23°47'N/166°13'W)		1.4	1.1	0.2

NOTE: Chart was last revised: 4/92, 10/99, 12/02

Dashes (---) located in datum columns indicate unavailable datum values for a tide station. Real-time water level predictions, and tidal current predictions are available on the Internet from <http://tidesandcurrents.noaa.gov>. (Apr 2007)

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo Morse code	R TR radio to
Al alternating	IQ interrupted quick	N nun	Rot rotating
B black	Is isophase	OBSC obscured	s seconds
Bn beacon	LT HO lighthouse	Oc occulting	SEC sector
C can	M nautical mile	Or orange	St M statute m
DIA diaphone	m minutes	Q quick	VQ very quick
F fixed	MICRO TR microwave tower	R red	W white
Fl flashing	Mkr marker	Ra Ref radar reflector	WHIS whistle
		Rb Rn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstr obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	
(1) Wreck, rock, obstruction, or shoal swept clear to the depth indicated.			
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.			

HEIGHTS

Heights in feet above Mean High Water.

Additional information can be obtained at nauticalcharts.noaa.gov.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the U.S. Coast Guard, Geological Survey, and National Geospatial-Intelligence Agency.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

9th Ed., May / 07 ■ Corrected through NM May 05/07
Corrected through LNM Apr. 24/07

19401**CAUTION**

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

This nautical chart has been designed to promote safe navigation. The Ocean Service encourages users to submit corrections, additions, or corrections to this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

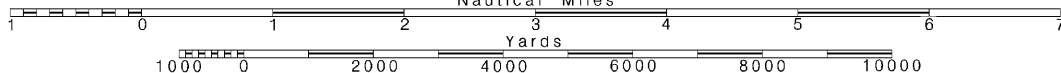
16

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:80,000
Nautical Miles

See Note on page 5.



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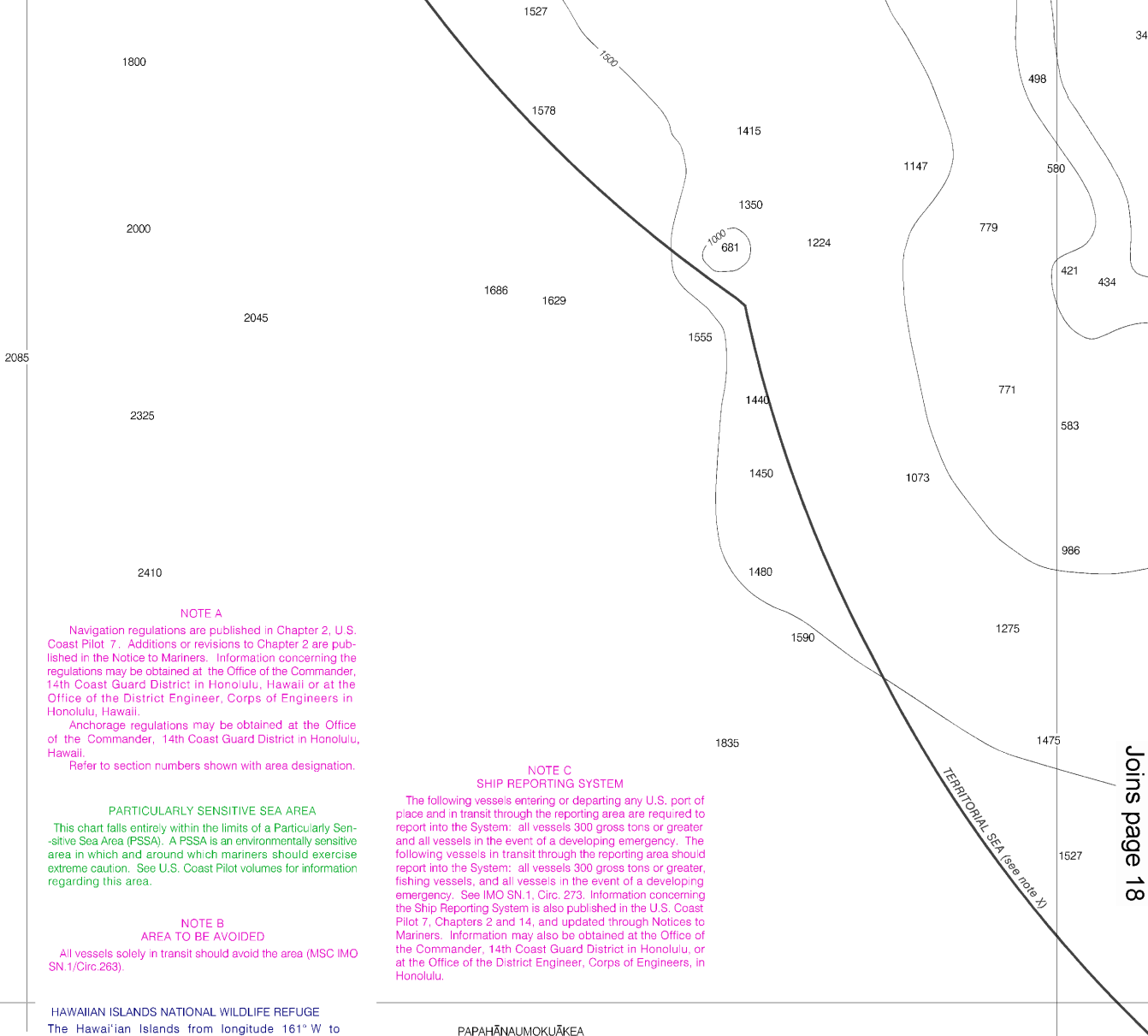
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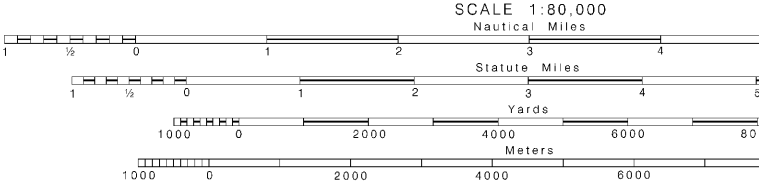
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The National
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Joins page 11

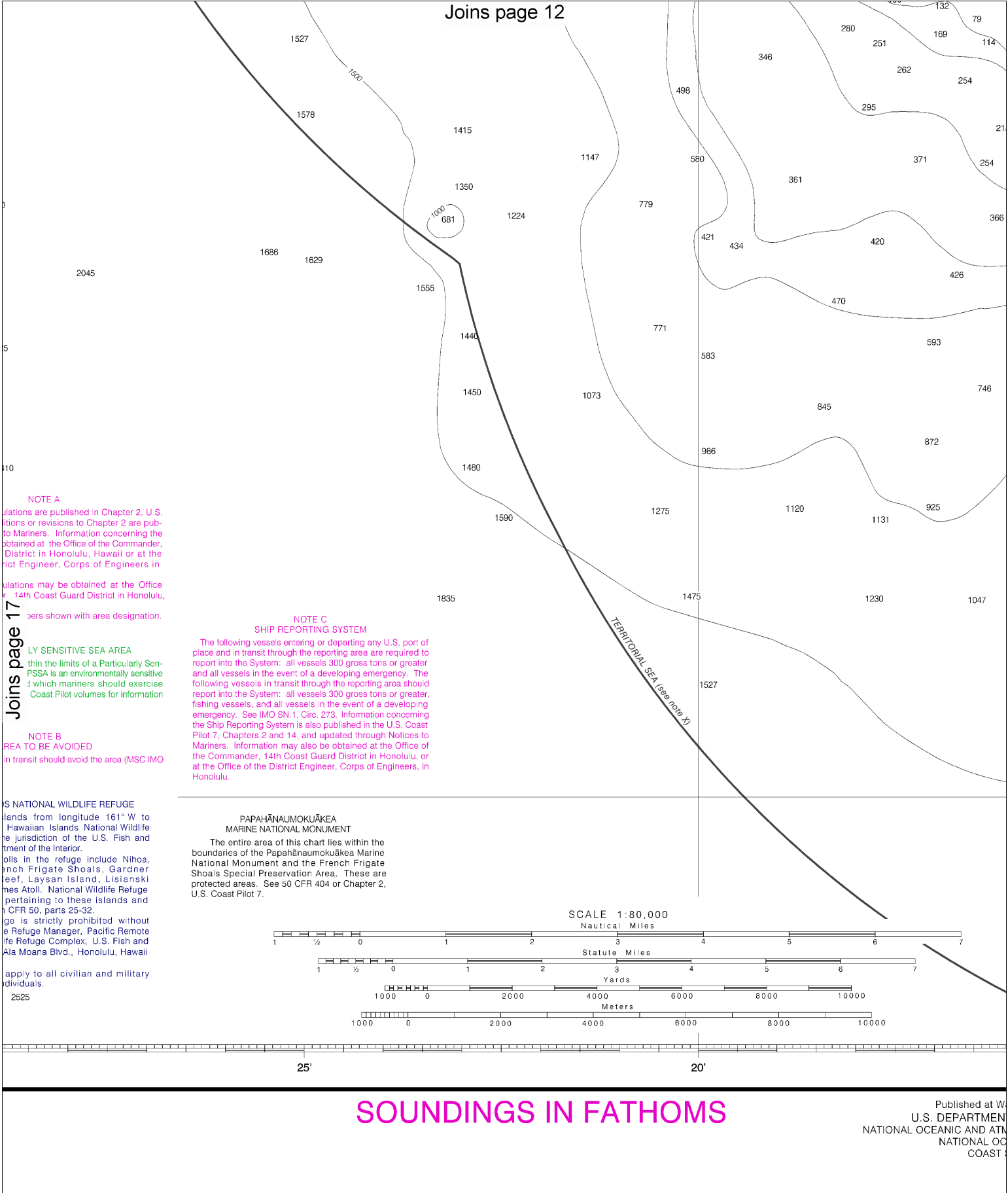


Joins page 18

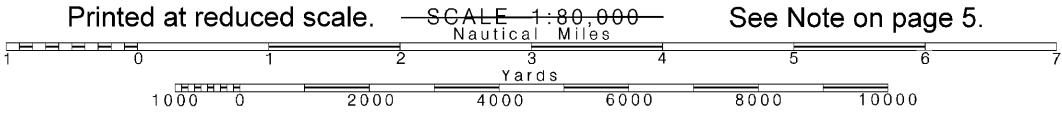


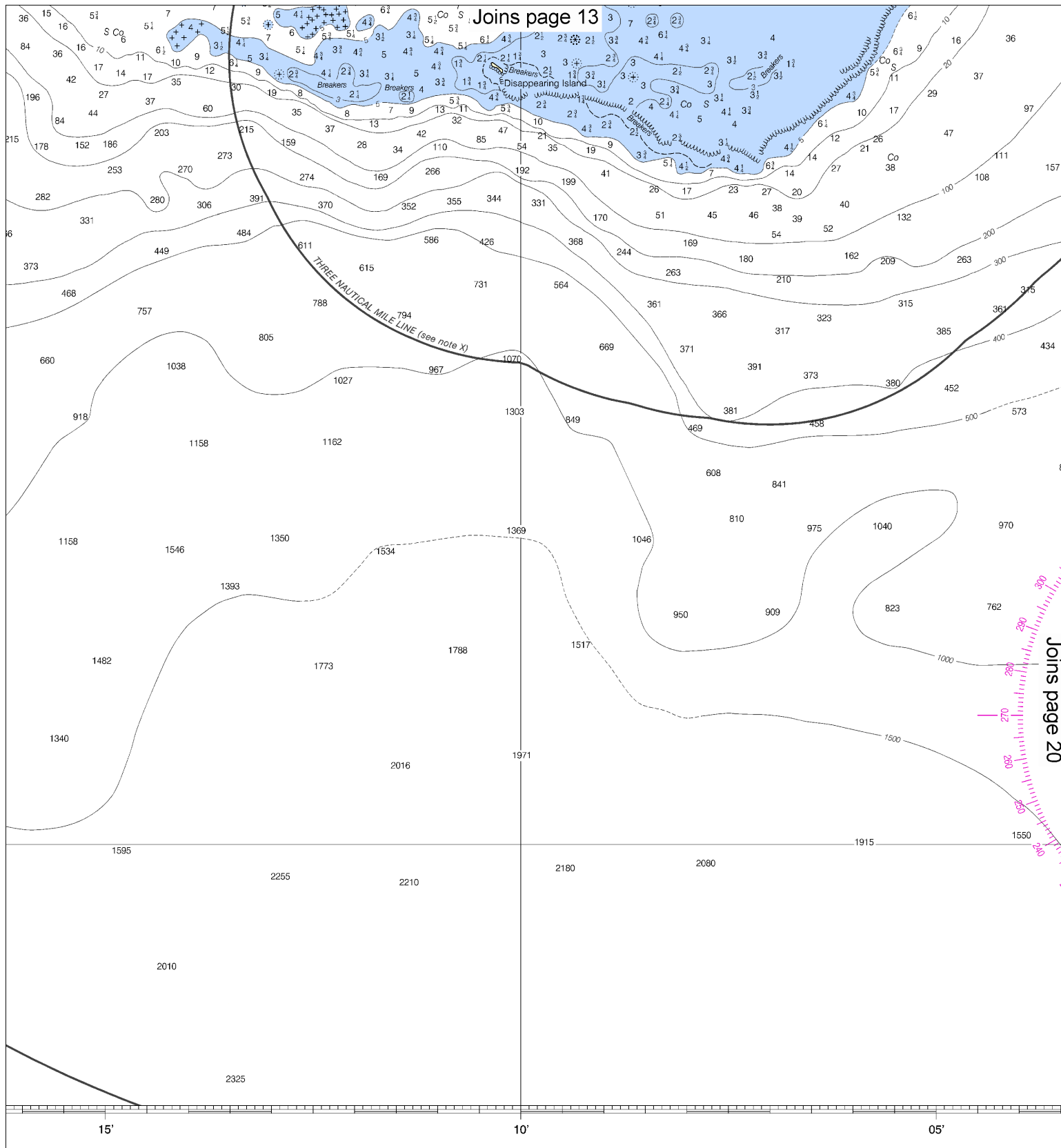
166°30' 25' 20'

SOUNDINGS IN FATHOMS



Note: Chart grid lines are aligned with true north.

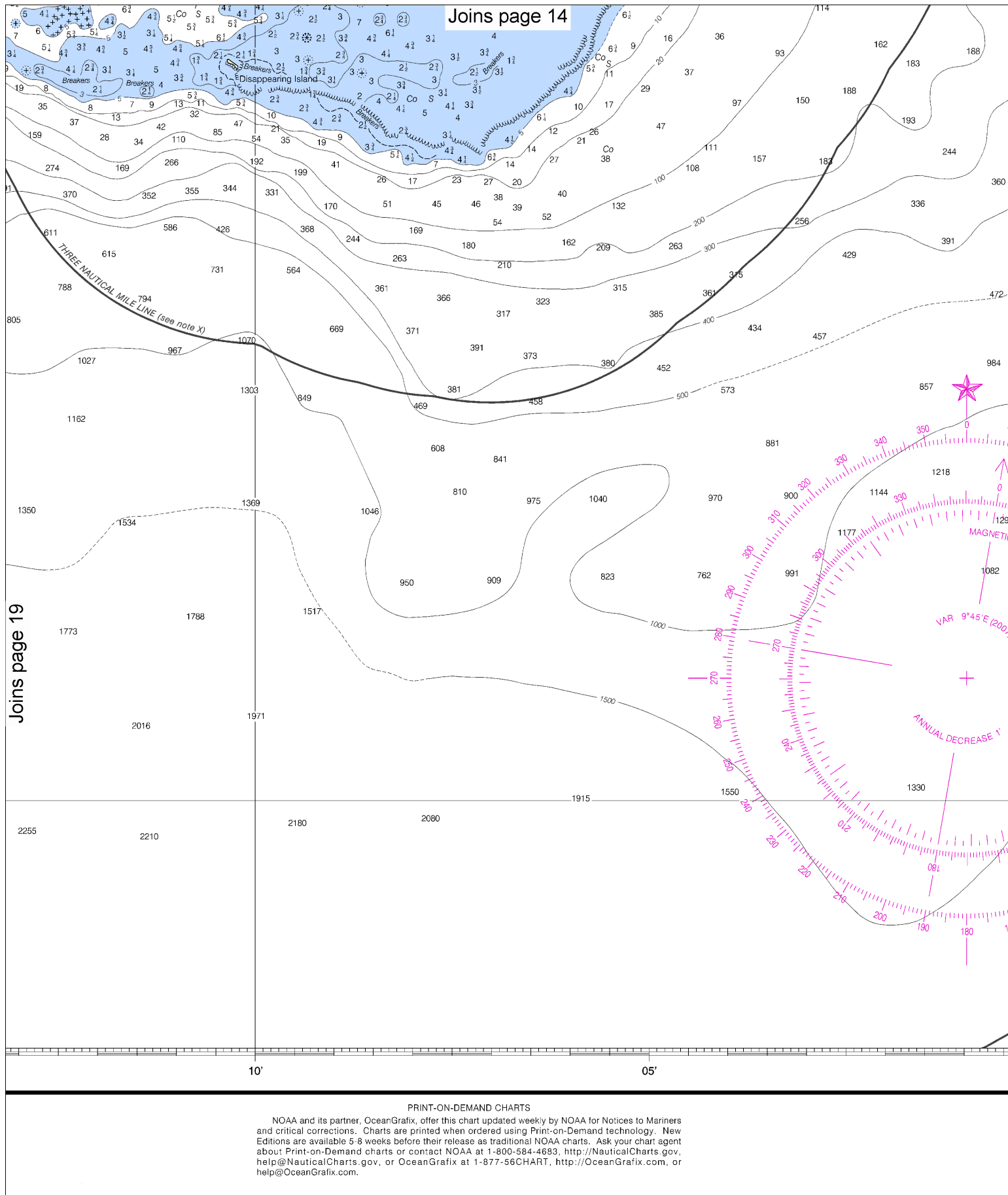




Washington, D.C.
 DEPARTMENT OF COMMERCE
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 U.S. COAST AND GEODETIC SURVEY

PRINT-ON-DEMAND CHARTS

NOAA and its partner, OceanGrafix, offer this chart updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 5-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at 1-800-584-4683, <http://NauticalCharts.gov>, help@NauticalCharts.gov, or OceanGrafix at 1-877-56CHART, <http://OceanGrafix.com>, or help@OceanGrafix.com.



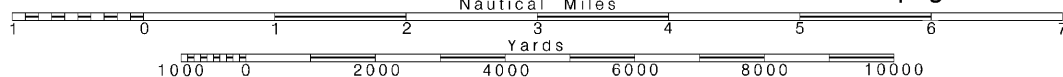
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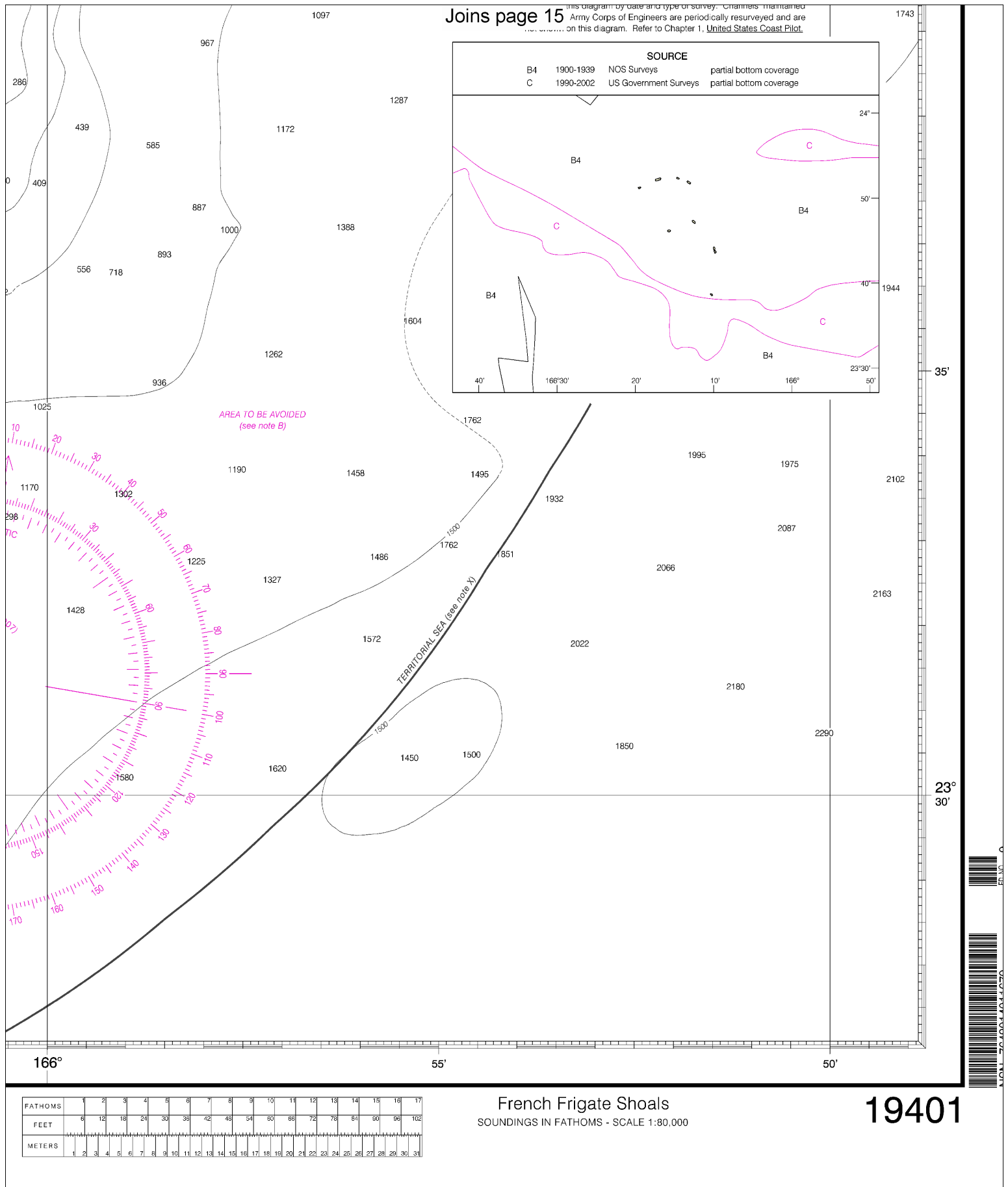
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:80,000
Nautical Miles

See Note on page 5.







EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other

vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!



NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

<http://www.nws.noaa.gov/nwr/>

Quick References

Nautical chart related products and information	—	http://www.nauticalcharts.noaa.gov
Online chart viewer	—	http://www.nauticalcharts.noaa.gov/mcd/NOAAChartViewer.html
Report a chart discrepancy	—	http://ocsddata.ncd.noaa.gov/idrs/discrepancy.aspx
Chart and chart related inquiries and comments	—	http://ocsddata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs
Chart updates (LNM and NM corrections)	—	http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html
Coast Pilot online	—	http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm
Tides and Currents	—	http://tidesandcurrents.noaa.gov
Marine Forecasts	—	http://www.nws.noaa.gov/om/marine/home.htm
National Data Buoy Center	—	http://www.ndbc.noaa.gov/
NowCoast web portal for coastal conditions	—	http://www.nowcoast.noaa.gov/
National Weather Service	—	http://www.weather.gov/
National Hurricane Center	—	http://www.nhc.noaa.gov/
Pacific Tsunami Warning Center	—	http://ptwc.weather.gov/
Contact Us	—	http://www.nauticalcharts.noaa.gov/staff/contact.htm



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NOAA's Office of Coast Survey



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